

Cubemass DCI Coriolis flowmeter

Compact sensor for smallest quantities with seamless system integration



More information and current pricing:

www.fr.endress.com/8CN

Benefits:

- Measuring accurately smallest quantities of liquids and gases
- Space-saving installation – compact single-tube design
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Suitable for skids – lightweight sensor
- High flexibility in system integration – wide range of communication interfaces
- Fast commissioning – pre-configured devices
- Automatic recovery of data for servicing

Specs at a glance

- **Max. measurement error** Mass flow (liquid): $\pm 0.1\%$ Volume flow (liquid): $\pm 0.1\%$ Mass flow (gas): $\pm 0.5\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 to 1000 kg/h (0 to 37 lb/min)
- **Medium temperature range** -50 to $+200 \text{ }^\circ\text{C}$ (-58 to $+392 \text{ }^\circ\text{F}$)
- **Max. process pressure** PN 40, Class 300, 10K, 400 bar (5800 psi)
- **Wetted materials** Measuring tube: 1.4539 (904L) Connection: 1.4539 (904L); 1.4404 (316/316L)

Field of application: Cubemass DCI is the proven sensor for the measurement of smallest flow rates in skids, test rigs and industrial robotics, e.g. in applications like lacquering or surface finishing. Neither high pressure nor alternating flow conditions compromise its accuracy. Equipment manufacturers value Cubemass DCI as compact Coriolis sensor with various communication possibilities.

Features and specifications

Liquids

Measuring principle

Coriolis

Product headline

Compact sensor for smallest quantities with seamless system integration. Measuring accurately smallest quantities of liquids and gases.

Sensor features

Space-saving installation – compact single-tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Suitable for skids – lightweight sensor.

Nominal diameter: DN 1 to 6 ($\frac{1}{24}$ to $\frac{1}{4}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +200 °C (+392 °F).

Transmitter features

High flexibility in system integration – wide range of communication interfaces. Fast commissioning – pre-configured devices. Automatic recovery of data for servicing.

Device as compact or remote version. Flexible outputs. Modbus RS485.

Nominal diameter range

DN 1 to 6 ($\frac{1}{24}$ to $\frac{1}{4}$ ")

Wetted materials

Measuring tube: 1.4539 (904L)

Connection: 1.4539 (904L); 1.4404 (316/316L)

Measured variables

Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

Max. measurement error

Mass flow (liquid): ± 0.1 %

Volume flow (liquid): ± 0.1 %

Mass flow (gas): ± 0.5 %

Density (liquid): ± 0.0005 g/cm³

Liquids

Measuring range

0 to 1000 kg/h (0 to 37 lb/min)

Max. process pressure

PN 40, Class 300, 10K, 400 bar (5800 psi)

Medium temperature range

-50 to +200 °C (-58 to +392 °F)

Ambient temperature range

Standard: -20 to +60 °C (-4 to +140 °F)

Option: -40 to +60 °C (-40 to +140 °F)

Sensor housing material

1.4301 (304), corrosion resistant

Transmitter housing material

Powder - coated die - cast aluminium

Degree of protection

IP67, type 4X enclosure. Remote transmitter: IP67, type 4X enclosure

Display/Operation

4 - line backlit display with touch control (operation from outside)

Configuration via local display and operating tools possible

Outputs

4 modular outputs:

0 - 20 mA (active)/4 - 20 mA (active/passive)

Pulse/frequency/switch output (passive), phase - shifted pulse

Relay

Inputs

1 modular input: status

Digital communication

HART, Modbus RS485

Liquids

Power supply

DC 16 to 62 V

AC 85 to 260 V (45 to 65 Hz)

AC 20 to 55 V (45 to 65 Hz)

Hazardous area approvals

ATEX, IECEx, NEC/CEC, NEPSI

Other approvals and certificates

3.1 material, calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR, SIL
CRN

Functional safety

Functional safety according to IEC 61508, applicable in safety-relevant applications in accordance with IEC 61511

Metrological approvals and certificates

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR

Material certificates

3.1 material

Gas

Measuring principle

Coriolis

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Space-saving installation – compact single-tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Suitable for skids – lightweight sensor.

Nominal diameter: DN 1 to 6 ($\frac{1}{2}$ " to $\frac{1}{4}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +200 °C (+392 °F).

Gas

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